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## (54) VACCINE USING SENDAI VIRUS VECTOR, AND VACCINE PROTEIN

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To obtain Sendai virus vector capable of simply and safely producing a vaccine against strong poison type influenza which has been difficult hitherto by retaining influenza virus protein or its part so as to be expressible.

**SOLUTION:** The Sendai virus vector retains strong poison type influenza virus protein such as subtype H5 or subtype H7 or its part so as to be expressible. Furthermore, the protein is preferably HA protein of A type influenza virus and the influenza vaccine is preferably produced by inoculating Sendai virus vector into hen's egg, proliferating Sendai virus complex in the hen's egg, recovering the proliferated Sendai virus vector from chorio-allantoic liquid of the hen's egg and inactivating the Sendai virus vector. A kit for ELISA of antibody is preferably prepared by using a protein for immunogen capable of obtaining by expressing a gene encoding a protein derived from pathogen integrated into Sendai virus vector so as to be expressible.

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2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

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**CLAIMS**

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[Claim]

[Claim 1] The Sendai-virus vector held possible [ a manifestation of influenza-viruses protein or its part ].

[Claim 2] A Sendai-virus vector given in the claim 1 whose influenza viruses are strong poison types.

[Claim 3] A Sendai-virus vector given in the claim 2 whose influenza viruses are the subtype H5 or the subtype H7.

[Claim 4] A Sendai-virus vector given in either of the claims 1-3 whose protein is HA protein of A type influenza viruses.

[Claim 5] The manufacture technique of the influenza vaccine using a Sendai-virus vector given in either of the claims 1-4.

[Claim 6] (a) Technique given in the claim 5 containing the process which inoculates a Sendai-virus vector into a hen's egg, the process which proliferates (b) Sendai-virus complex in a hen's egg, and the process which collects from \*\*\*\*\* of a hen's egg the Sendai-virus vectors which carried out (c) propagation.

[Claim 7] Technique given in the claim 6 which includes further the process which carries out the inactivation of the collected Sendai-virus vector.

[Claim 8] Technique given in the claims 6 or 7 which include further the process which refines influenza-viruses protein or its part from a Sendai-virus vector.

[Claim 9] The influenza vaccine which contains the Sendai-virus vector of a publication in either of the claims 1-4.

[Claim 10] An influenza vaccine given in the claim 9 which is the live vaccine of the Sendai virus.

[Claim 11] An influenza vaccine given in the claim 9 containing the Sendai virus by which the inactivation was carried out.

[Claim 12] The influenza vaccine which contains in either of the claims 1-4 the influenza-viruses protein refined from the Sendai-virus vector of a publication, or its part.

[Claim 13] The technique of the \*\*\*\*\* nation to influenza characterized by medicating the intermediate host of influenza viruses other than the Homo sapiens with a vaccine given in either of the claims 9-12.

[Claim 14] Technique given in the claim 13 which medicates the respiratory tract with a vaccine.

[Claim 15] Technique given in the claims 13 or 14 which carry out multiple-times medication of the vaccine.

[Claim 16] Protein for immunogens which can be obtained by making the gene which carries out the code of the protein of the pathogen origin included in the Sendai-virus vector possible [ a manifestation ] discover.

[Claim 17] Protein for immunity analysis which can be obtained by making the gene which carries out the code of the protein of the pathogen origin included in the Sendai-virus vector possible [ a manifestation ] discover.

[Claim 18] The kit for immunological analysis of an antibody which contains the protein of a publication in a claim 17.

[Claim 19] The kit for ELISA of an antibody which contains the protein of a publication in a claim 17.

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